

ally of a central drapage-compensated phase channel CPC designed for zeroth ( $0^{th}$ ) order diffraction. It is to be noticed that the phase channel in this lens parallels the base curve of the lens and, yet, is still able to contribute to the add power rather than to the distance power. This follows from the fact that we are using a negative phase plate which provides focussed light at the zeroth ( $0^{th}$ ) and negative first ( $1^{st}$ ) order diffractive focal points.

A desirable lens encompassed by this invention has an optic zone of about 6 to about 8 millimeters comprising a concentric phase plate of about 4 to about 5 millimeters in diameter, viz., about 4.5 millimeters in diameter, and an annular channel having a width of about 0.5 to about 2.0 millimeters.

In those situations where the degree of mobility of the lens is extreme but the level of glare reduction achieved by the practice of the invention is considered most desirable, the lens may be modified by inclusion of the keel construction outside of the optic zone, as described in commonly assigned copending application Ser. No. 120,263 now abandoned, filed on even date herewith, to decrease the level of mobility yet retain the advantages of the invention.

The lens of the invention may be made conventional processes in the art. For example, anhydrous versions of the base phase of a soft contact lens may be ground to provide the lens structures of the invention. Lenses may be casted from molds replicating the lens structures of the invention. The lenses may be made of glass and the conventional plastics used for making contact lenses.

I claim:

1. An ophthalmic contact lens with a phase plate and a pure refractive portion within its optic zone.

2. The ophthalmic contact lens of claim 1 wherein the pure refractive portion effects a phase shift which contributes to a focal power of a phase plate of the lens.

3. The ophthalmic contact lens of claim 1 wherein the pure refractive portion is designed with a power that coincides with one of the diffractive powers of the phase plate.

4. The ophthalmic contact lens of claim 3 wherein the pure refractive portion is designed to essentially parallel the base curve of the contact lens, thereby focussing light at the zeroth ( $0^{th}$ ) diffractive focal point of the phase plate of the optic zone.

5. The ophthalmic contact lens of claim 4 wherein the phase plate is located centrally and the pure refractive portion forms the remaining peripheral annular portion of the optic zone.

6. The ophthalmic contact lens of claim 5 wherein the pure refractive portion is displaced from the base curve of the lens so as to form one of more pure refractive channels in the lens.

7. The ophthalmic contact lens of claim 6 wherein said pure refractive channel is designed to parallel the base curve of the contact lens, thereby focussing light at the zeroth ( $0^{th}$ ) diffractive focal point of the phase plate of the optic zone.

8. The ophthalmic contact lens of claim 7 wherein the phase plate is designed with half-wave eschelettes so as to split light equally between the zeroth ( $0^{th}$ ) and first ( $1^{st}$ ) order diffractive focal points and wherein the pure refractive channel is located peripherally of the phase plate and set at a quarterwave depth below the base curve.

9. The ophthalmic contact lens of claim 5 wherein a transition zone is placed at the juncture between the pure refractive channel and the phase plate.

10. The ophthalmic contact lens of claim 9 wherein the transition zone is an annular zone circumscribing the phase plate.

11. The ophthalmic contact lens of claim 6 wherein the peripheral end of the pure refractive channel is open so as to allow the lens to drape to the eye.

12. The ophthalmic contact lens of claim 11 wherein a transition zone is placed at the junction between the pure refractive channel and the phase plate.

13. The ophthalmic contact lens of claim 8 wherein the peripheral end of the pure refractive channel is open so as to allow the lens to drape to the eye.

14. An ophthalmic contact lens of the Cohen lens design with a phase plate and a pure refractive portion within its optic zone.

15. The ophthalmic contact lens of a Cohen lens design of claim 14 wherein said lens is a multifocal lens.

16. The ophthalmic contact lens of a Cohen lens design of claim 15 wherein the pure refractive portion is designed with a power that coincides with one of the diffractive powers of the phase plate.

17. The ophthalmic contact lens of a Cohen lens design of claim 16 wherein the pure refractive portion is designed to essentially parallel the base curve of the contact lens, thereby focussing light at the zeroth ( $0^{th}$ ) diffractive focal point of the phase plate of the optic zone.

18. The ophthalmic contact lens of a Cohen lens design of claim 17 wherein the phase plate is located centrally and the pure refractive portion forms the remaining peripheral annular portion of the optic zone.

19. The ophthalmic contact lens of a Cohen lens design of claim 18 wherein the pure refractive portion is displaced from the base curve of the lens so as to form one or more pure refractive channels in the lens.

20. The ophthalmic contact lens of a Cohen lens design of claim 19 wherein said pure refractive channel is designed to parallel the base curve of the contact lens, thereby focussing light at the zeroth ( $0^{th}$ ) diffractive focal point of the phase plate of the optic zone.

21. The ophthalmic contact lens of a Cohen lens design of claim 20 wherein the phase plate is designed with half-wave eschelettes so as to split light equally between the zeroth ( $0^{th}$ ) and first ( $1^{st}$ ) order diffractive focal points and wherein the pure refractive channel is located peripherally of the phase plate and set at a quarter-wave depth below the base curve.

22. The ophthalmic contact lens of a Cohen lens design of claim 18 wherein a transition zone is placed at the juncture between the pure refractive channel and the phase plate.

23. The ophthalmic contact lens of a Cohen lens design of claim 22 wherein the transition zone is an annular zone circumscribing the phase plate.

24. The ophthalmic contact lens of a Cohen lens design of claim 19 wherein the peripheral end of the pure refractive channel is open so as to allow the lens to drape to the eye.

25. The ophthalmic contact lens of a Cohen lens design of claim 24 wherein a transition zone is placed at the juncture between the pure refractive channel and the phase plate.

26. The ophthalmic contact lens of a Cohen lens design of claim 21 wherein the peripheral end of the